



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,920	10/31/2003	Daniel C. Conrad	US19984054-8	3660

7590 11/02/2006

WHIRLPOOL PATENTS COMPANY - MD 0750
500 Renaissance Drive, Suite 102
St. Joseph, MI 49085

EXAMINER

KHAN, AMINA S

ART UNIT PAPER NUMBER

1751

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,920

Applicant(s)

CONRAD ET AL.

Examiner

Amina Khan

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 24-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to applicant's amendments filed on August 8, 2006.
2. Claims 1-13 and 24-30 are pending. Claims 14-23 have been cancelled. Claim 1 has been amended. Claims 24-30 are new.
3. Claim 13 stands rejected under 35 U.S.C. 112, second paragraph, for the reasons set forth in the previous office action. The rejection of the claim is maintained.
4. Claims 1-5 and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Flynn et al. (US Patent 5,962,390) in view of Dickey (US 3,410,118) for the reasons set forth in the previous office action. The rejection of the claim is maintained.
5. Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Flynn et al. (US Patent 5,962,390) in view of Dickey (US 3,410,118) and further in view of De Pas et al. (US Patent 3,163,028) for the reasons set forth in the previous office action. The rejection of the claim is maintained.
6. Claims 7 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Flynn et al. (US Patent 5,962,390) in view of Dickey (US 3,410,118) and further in

view of Tatch et al. (US 5,431,827) for the reasons set forth in the previous office action. The rejection of the claim is maintained.

7. Claims 8,9,11 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Flynn et al. (US Patent 5,962,390) in view of Dickey (US 3,410,118) and Tatch et al. (US 5,431,827) and further in view of Krugmann (US 4,252,546) for the reasons set forth in the previous office action. The rejection of the claim is maintained.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-13 and 24-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "agitation cycles" in line 13. Claim 29 recites the limitation "agitation cycles" in line 13. There is insufficient antecedent basis for this limitation in the claims.

Claims 2-12 and 24-28 are also rejected for being dependent on claim 1 and inheriting the same deficiency.

10. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 27 recites "the wash liquor comprises working fluids that

have a flash point that range from 140°F to about 220°F". Claim 27 depends on the working fluid as defined in claim 1. The components of the working fluid are not clearly defined in terms of its chemical constituents, therefore the flash point of the working fluid cannot be determined.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-5,13,24,27,29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flynn et al. (US 5,962,390) in view of Dickey (US 3,410,118).

Flynn et al. teach dry compositions comprising perfluorocarbons, perfluoroethers, siloxanes, hydrofluorocarbons, and surfactants with a hydrophilic-lipophilic balance less than 14. Flynn et al. further teach methods of cleaning fabrics comprising contacting fabrics with a cleaning composition comprising an alkoxy-substituted perfluoroalkane, agitating to promote dissolving, dispersing or displacing of soil using any conventional agitation means, removing the cleaning composition, rinsing using any conventional dry cleaning solvent (as mentioned above) and air drying with or without added heat. In one embodiment, Flynn et al. further teach that co-solvents may be chosen such that the resulting composition has no flash point (column 8, line 34 to column 9, line 6; column 10, lines 4-18).

Flynn et al. are silent as to the step of oscillating randomly in opposite directions as instantly claimed and do not teach repeating the oscillation and repeating the oscillation step. Flynn et al. is silent as to the flash points of the compositions.

Dickey, in the analogous art of dry cleaning methods, teaches dry cleaning apparatus with baskets which may be selectively rotated in opposite directions (column 3, lines 9-15). It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the primary reference by incorporating the agitation means taught by Dickey because the agitation means taught by Dickey allow for improved mixing of the working fluids and fabrics during dry cleaning. Furthermore, the primary reference invites the inclusion of "any conventional agitation means" (column 8, lines 56-59). The burden is on the applicant to prove otherwise.

It would have been further obvious to optimize the cleaning and drying steps by randomizing and repeating the oscillation steps because optimization of a result effective variable and repetition of steps only requires routine skill in the art. Furthermore it is conventional to repeat oscillation steps.

Regarding the instantly claimed flash points, Flynn et al. teach that while in one embodiment where perfluorocarbons are combined with cosolvents, solutions with no flash point can result. However, perfluorocompounds may also be used alone (column 8, lines 35-51). It would be obvious to one of ordinary skill in the art that the perfluorocompounds may have flash points in the instantly claimed range. The patent office is not equipped to measure the flash points.

13. Claims 25,26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flynn et al. (US Patent 5,962,390) in view of Dickey (US 3,410,118) as applied to the claims above, and further in view of Tatch et al. (US 5,431,827) and Krugmann (US 4,252,546).

Flynn and Dickey are relied upon as set forth above.

Flynn and Dickey do not teach the use of membrane or permeate filters or cooling the fluid before filtering.

Tatch et al., in the analogous art of dry cleaning, teaches methods of dry cleaning utilizing membrane filters (column 6, lines 35-50). Tatch et al. further teach separating water from dry cleaning fluid by filtering (column 6, lines 40-50).

Krugmann teaches methods of filtering out the water fraction of the cleaning solvent by condensing the water to ice crystal and floating the ice to a separating container (column 3 lines 1-10).

It would be obvious to one of ordinary skill in the art at the time the invention was made to modify Flynn and Dickey by incorporating the water condensation means of Krugmann et al. followed by the filtration means taught by Tatch et al. because Krugmann teaches producing ice particles by cooling the working fluid and Tatch et al. teaches the use of membrane filters to allow for the efficient removal of particulate matter from the wash liquor during dry cleaning. Furthermore, Flynn invites the inclusion of a step in which "displaced water is separated from the liquid composition" (column 9, lines 62-65). One of ordinary skill in the art would have been motivated to combine the teachings of the references absent unexpected results.

Response to Arguments

14. Applicant's arguments regarding Flynn in view of Dickey have been fully considered but they are not persuasive. The applicant argues:

Regarding Flynn: "there is no mention of providing a stream of air through the wash chamber."

Regarding Dickey: "There is no mention or suggestion to mechanically clean clothes"

The examiner respectfully disagrees. Flynn clearly teaches air drying to dry the textiles (column 8, lines 55-65). The examiner asserts that the air drying step meets the claimed limitation of providing an air stream. Dickey clearly teaches rotating the clothes in the presence of the working fluid which meets the limitation of mechanically cleaning the clothes. The rejection of the claims is maintained.

15. Applicant's arguments regarding Flynn in view of Dickey and further in view of Tatch have been fully considered but they are not persuasive. The applicant argues:

"Tatch et al. does not mention removing impurities from a working fluid through membrane means to collect and reuse the working fluid in potentially the next wash load."

The examiner respectfully disagrees. The claims do not require recycling the working fluid. Tatch meets the limitations of filtering the working fluid and collecting the working fluid for reuse (column 6, lines 35-50). The rejection of the claims is maintained.

16. Applicant's arguments regarding Flynn in view of Dickey and Tatch and further in view of Krugmann have been fully considered but they are not persuasive. The applicant argues:

"Krugmann does not teach or suggest that the water ice crystals are separated by filtration."

The examiner respectfully disagrees. It would be obvious to one of ordinary skill in the art at the time the invention was made to modify Flynn and Dickey by incorporating the water condensation means of Krugmann et al. followed by the filtration means taught by Tatch et al. because Krugmann teaches producing ice particles by cooling the working fluid and Tatch et al. teaches the use of membrane filters to allow for the efficient removal of particulate matter from the wash liquor during dry cleaning. Furthermore, Flynn invites the inclusion of a step in which "displaced water is separated from the liquid composition" (column 9, lines 62-65). One of ordinary skill in the art would have been motivated to combine the teachings of the references absent unexpected results. The rejection of the claims is maintained.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Amina Khan, PhD
Patent Examiner
October 30, 2006



LORNA M. DOUYON
PRIMARY EXAMINER